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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,417	09/27/2001	Richard Charles Allen	56233US002	3811
32692	7590	11/01/2004		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
			EXAMINER VARGOT, MATHIEU D	
			ART UNIT 1732	PAPER NUMBER

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/965,417

Applicant(s)

ALLEN ET AL.

Examiner

Mathieu D. Vargot

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Claims 1-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has amended independent claims 1, 15 and 21 to recite that the rotator element is configured and arranged to rotate the polarization of the light by a "fixed angle". However, an electronic review of the application shows that the term "fixed" is not in the application, nor is such necessarily gleaned from the application as filed. While the instant specification supports rotating the polarization of the light, there is no indication that such rotation need be at a fixed angle. Applicant needs to point out exactly where support exists in the specification as filed for the aspect of "fixed" or delete this language.

2. At page 22, line 26 of the instant specification, there is a reference to a copending application that needs to be identified using the serial number thereof.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over British Patent Application 2,326,727 in view of PCT Publication WO 98/04651 (see page 16, lines 5-6 and 17-36) essentially for reasons of record as set forth in paragraph 3 of the previous action with the additional comments. It is noted that applicant has amended the claims to recite that the rotator element rotates the polarization of the light by a "fixed angle of at least 5 degrees". In the first place, this is submitted to be new matter as noted in paragraph 1, supra. However, even if such is not new matter, such is seen to have been an obvious variation over the method as disclosed in British -727 dependent on the exact information the spatial modulator is desired to output. Indeed, if the information output is to remain constant, the polarization rotation effect caused by the liquid crystal layer (3) of British -727 would remain fixed. In essence, the exact rotational angle that the liquid crystal layer affords to the polarized light passing through would have been obvious dependent on the exact display desired.

4. Claims 15-17, 20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over British Patent Application 2,326,727 in view of British Patent Application 2,324,881 and PCT Publication WO 98/04651 essentially for reasons of record as set forth in paragraph 3 supra and paragraph 4 of the previous action.

5. Applicant's arguments filed May 24, 2004 have been fully considered but they are not persuasive. Applicant has amended the claims with a recitation that is

considered at this point to be new matter as set forth in paragraph 1, supra. However, even if such is not new matter, it is submitted that arguments advanced by applicant are simply not persuasive. The instant claims do not the formation of a spatial light modulator as shown in British -727. Clearly, the modulator would have rotated the light at some angle since it functions to display a message. If this message were to remain constant, the angle would have been fixed. It is submitted that the motivation for the combination would exist in an attempt to reduce the thickness of the modulator for a lighter weight thereof, something that one of ordinary skill in the art is always attempting to do. Again, it is the use of the plastic film in lieu of a glass substrate that is being relied upon to modify the primary reference. It is believed that the products themselves do not have to be exactly the same, but that the obviousness stems from the teaching of the equivalence of glass and plastic film in PCT -651 as a support for the liquid crystal layer.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaiani, can be reached on 571 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot  
October 28, 2004

  
Mathieu D. Vargot  
Primary Examiner  
Art Unit 1732

10/28/04